(Breakthrough, March 1985)

ACHIEVING OPTIMAL LEARNING STATES

Several persistent themes dominate the history of consciousness enquiry, one of which is that humans use only a small portion of their mental capacity. Estimates vary, but there is agreement that most of us use less than 10 percent, and some researchers say that figure is more on the order of one-tenth of one percent. The obvious question arising from this observation is “How can we tap some, or all, of that wasted potential?” The question has not gone unanswered, and in the past fifty years the answers have varied widely. But a careful examination of the answers given in the last ten or fifteen years reveals a common thread. The thread is the conviction that optimal learning takes place when the learner is in a certain state of consciousness. The state is not one of intense arousal, as when one is anxious, excited, hyperactive or fearful. Nor is it sleep as some people thought twenty years ago. The optimal learning state is what brain researchers call the “theta state”, which corresponds to brain waves emitted by the left and right hemispheres of the brain. By using an electroencephalograph (EEG), we find that the brain emits electrical impulses within a frequency range of approximately 0.5 Hertz to 26 Hertz. For the sake of convenience, this range has been parceled into four sub-ranges:

BRAIN STATE CONSCIOUSNESS CORRELATES

Beta - 13-26 Hz - Alert, sometimes focused, Problem Solving - analytic

Alpha - 8-13 Hz - Alert but unfocused

Theta - 4-8 Hz - Very relaxed, optimal learning state

Delta - 0.5-4 Hz - Deep sleep, unconscious

Rough correlates for these frequency-ranges have been established by observation. Numerous hypotheses have been advanced to explain the apparent inconsistency between the claim that theta is the optimal learning state and beta the optimal problem solving state. One of the more appealing hypotheses is that beta involves our critical, judgmental faculty, whereas theta is a highly receptive, uncritical state. Educators have long noted the detrimental effect of a judgmental posture on learning.

If theta is the best learning state, how do we achieve it? It happens that theta is the “slipperiest” of the four EEG ranges. The only time most of us are in theta is during the hypnogogic state—on the way into sleep - and during the hypnopompic state—the way out of sleep. Both of these states are normally of short duration, a few minutes or less. Only highly experienced meditators can achieve and hold the theta state for an extended period of time. Unless we are willing to discipline ourselves through the years of meditation practice, extended periods of the theta state might seem unattainable.

Listening to only a theta signal often results in sliding right down into delta—sleep. To prevent this, a beta signal is superimposed on the theta, which brings about relaxed alertness. But this relaxed alertness is of a special kind, for Hemi-Sync®—as the name implies—synchronizes the brain's hemispheres. There has been so much discussion about hemispheric symmetry in the past decade that we're sure you are aware of the importance of having both hemispheres of the brain function as an unit. There is near universal agreement that a balanced personality is desirable - one in which the rational and intuitive aspects work in harmony. Hemi-Sync helps accomplish this and the effect it has upon students is dramatic.

Hemi-Sync® is a registered trademark of Interstate Industries, Inc.
© 1985 The Monroe Institute